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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/613,162	07/10/2000	Thomas Carl Mesing	13DV12817	9214

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EXAMINER

MUSSER, BARBARA J

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 07/05/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/613,162

Applicant(s)

MESING ET AL.

Examiner

Barbara J. Musser

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 13-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-12, drawn to a method of making a tube clamp, classified in class 156, subclass 212.
  - II. Claims 13-30, drawn to a tube clamp, classified in class 428, subclass 131.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made by a different method, such as placing fiber in a mold, closing the mold, and injecting resin into the mold to surround the fibers. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with Carmen Sanata Maria on 6/11/02 a provisional election was made with traverse to prosecute the invention of group I, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action. Claims 13-30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Information Disclosure Statement***

5. The information disclosure statement filed 7/10/00 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what is meant by "net shape" as the term is not defined in the specification.

Regarding claim 11, resin transfer molding does not use pre-impregnated sheets of material as shown by applicant's own specification, which lists it as an alternative to pre-impregnated sheets.(Pg. 10, ll. 6-7) It is unclear how a technique used with dry fiber sheets can use pre-impregnated sheets.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-5 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiley(U.S. Patent 5,435,506) in view of Alston et al.(U.S. Patent 6,103,864) and Clark et al.(U.S. Patent 6,319,346)

Wiley discloses forming tube clamps by compression molding fiber-reinforced polymer in the shape of a tube clamp and then removing the shaped material from the mold.(Col. 3, ll. 44-57) While the reference discloses polyamide, a thermoplastic, the material listed, PMR-15, is a mixture of polyimide and carbon fibers as shown by Alston et al.(Col. 1, ll. 33-36) Clearly, the use of Polyamide rather than polyimide is a spelling mistake in Wiley. Thus the material used, PMR-15, is a thermosetting material, i.e. is curable. One in the art would understand that the material was cured as that it how thermosetting materials are used.

The reference also does not disclose stacking multiple sheets of material in the mold to form the tube clamp. However, stacking multiple sheets in a mold to form an article is well-known and conventional in the bonding arts as shown for example by Yamamoto et al. which discloses stacking multiple sheets in a mold.(Figure 5)

Regarding claim 2, Wiley suggests using randomly oriented fiber plies in the clamp, but the specific materials used do not appear to be integral to the clamp formation. Yamamoto et al. discloses that random fibers can create a roughened surface in the final product and uses continuous fibers instead.(Col. 1, ll. 58-60; Col. 3, ll. 3-7) It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the random fibers of Wiley with the continuous fibers of Yamamoto et al. since this would create a cleaner surface on the clamp and since Wiley's use of random fibers is only suggested.

Regarding claim 3, while Wiley suggests the use of randomly oriented fibers, this is clearly only exemplary, and other well-known and conventional materials may be used. Woven material impregnated with resin are well-known and conventional alternatives in the art to nonwovens impregnated with resin and it would have been obvious to one of ordinary skill in the art at the time the invention was made to used either woven or nonwoven materials to form the clamp since both are well-known alternatives in the art.

Regarding claim 4, Wiley discloses the sheets contain randomly oriented fibers.(Col. 3, ll. 49-50)

Regarding claim 5, the sheet is formed from graphite fiber with polyimide resin.(Wiley, Col. 3, ll. 49-50 and Alston, Col. 1, ll. 33-36)

Regarding claims 10 and 11, Wiley discloses the sheet is compression molded(Col. 3, ll. 50-51) but not the exact type of apparatus used. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any well-known and conventional molding apparatus in the process of Wiley such as autoclaving and using a metal press as these are all well-known and conventional alternatives in the art for compressing and molding a sheet to a desired shape.

Regarding claim 12, Wiley discloses using the process to make a clamp. One in the art would understand that the clamp would have two halves, both made via the same molding technique.

10. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 1 above, and further in view of the admitted prior art.

The specification does not require the shape of the clamp to have the same thickness throughout. One in the art would appreciate that the method of Wiley could be used to make any style clamp and it would have been obvious to use the method of Wiley, Alston et al., and Yamamoto et al. to form the clamps of the admitted prior art since they are both clamps used in the airline industry. When forming clamps such as in the admitted prior art one would appreciate that a filler would be needed between the top and bottom as the clamp is not the same thickness throughout. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use any

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type of filler such as plies cut to shape since this would fill in the space between the top and bottom of the clamp.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Barbara J. Musser** whose telephone number is **(703) 305-1352**. The examiner can normally be reached on Monday-Thursday 7AM-4PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

*BJM*

BJM  
July 1, 2002

*Michael W. Ball*  
Michael W. Ball  
Supervisory Patent Examiner  
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